**IN THE CLAIMS**

Please amend claims 21, 30, 51-54, and 57-60.

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. – 14. **(Canceled)**

15. **(Previously presented)** A method of binding an isolated or recombinant DmGPCR with a DmGPCR binding partner comprising the steps of: contacting a composition comprising a DmGPCR with a DmGPCR binding partner; and allowing said DmGPCR binding partner to bind said DmGPCR wherein said DmGPCR is DmGPCR7 (SEQ ID NO: 18) and wherein said DmGPCR binding partner is a leucokinin (LK).

16. – 20. **(Canceled)**

21. **(Currently amended)** The method according to claim 15, wherein said leucokinin has a sequence with at least 80% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO: 175), LK-V (SEQ ID NO: 176), LK-VI (SEQ ID NO: 177), [[and]] LK-VIII (SEQ ID NO: 178), Culekinin (SEQ ID NO: 179), ~~LY7MMaca lymnolcinin~~ Lymnaca lymnokinin (SEQ ID NO: 180), DLK-1 (SEQ ID NO : 181), DLK-2 (SEQ ID NO: 182), and ~~DLK-2a~~ DLK-2A (SEQ ID NO: 183).

22. – 27. **(Canceled)**

28. **(Previously presented)** A method for identifying a modulator of binding and/or function between a DmGPCR and a DmGPCR binding partner, comprising the steps of :

contacting a DmGPCR binding partner and a composition comprising a DmGPCR in the presence or in the absence of a putative modulator compound; detecting binding between the DmGPCR binding partner and the DmGPCR ; and determining whether binding in the presence of said putative modulator compound is increased or decreased compared to binding in the absence of said putative modulator compound, determining whether function in the presence of said putative modulator compound is increased or decreased compared to function in the absence of said putative modulator compound, wherein said DmGPCR is DmGPCR7 (SEQ ID NO:18).

29. **(Original)** The method according to claim 28, wherein said DmGPCR binding partner is a leucokinin.

30. **(Currently amended)** The method according to claim 29, wherein said leucokinin has a sequence with at least 80% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO: 175), LK-V (SEQ ID NO: 176), LK-VI (SEQ ID NO: 177), LK-VIII (SEQ ID NO: 178), Culekinin (SEQ ID NO: 179), ~~Ly7linaea lymnokinin~~ Lymnaea lymnokinin (SEQ ID NO: 180), DLK-1 (SEQ ID NO: 181), DLK-2 (SEQ ID NO: 182), and ~~DLK-2a~~ DLK-2A (SEQ ID NO: 183).

31. – 50. **(Canceled)**

51. **(Currently amended)** The method of claim 28 wherein DmGPCR binding is a leucokinin that has a sequence with at least 90% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), ~~Ly7linaea lymnokinin~~ Lymnaea lymnokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and ~~DLK-2a~~ DLK-2A (SEQ ID NO:183).

52. **(Currently amended)** The method of claim 28 wherein said DmGPCR binding partner is a leucokinin that has a sequence with at least 95% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), ~~Ly7linaea lynmokinin~~ Lymnaea lymnokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and ~~DLK-2a~~ DLK-2A (SEQ ID NO:183).

53. **(Currently amended)** The method of claim 28 wherein is a leucokinin that has a sequence with at least 99% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO: 178), Culekinin (SEQ ID NO:179), ~~Ly7linaea lynmokinin~~ Lymnaea lymnokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and ~~DLK-2a~~ DLK-2A (SEQ ID NO:183).

54. **(Currently amended)** The method of claim 28 wherein said DmGPCR binding partner is a leucokinin that has a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), ~~Ly7linaea lynmokinin~~ Lymnaea lymnokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and ~~DLK-2a~~ DLK-2A (SEQ ID NO:183).

55. – 56. **(Canceled)**

57. **(Currently amended)** The method according to claim 15, wherein said DmGPCR binding partner is a leucokinin that has a sequence with at least 90% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ

ID NO:179), ~~Ly7linaca lynmokinin~~ Lymnaca lymnokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and ~~DLK-2a~~ DLK-2A (SEQ ID NO:183).

58. **(Currently amended)** The method according to claim 15, wherein said DmGPCR binding partner is a leucokinin that has a sequence with at least 95% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), ~~Ly7linaca lynmokinin~~ Lymnaca lymnokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and ~~DLK-2a~~ DLK-2A (SEQ ID NO:183).

59. **(Currently amended)** The method according to claim 15, wherein said DmGPCR binding partner is a leucokinin that has a sequence with at least 99% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), ~~Ly7linaca lynmokinin~~ Lymnaca lymnokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and ~~DLK-2a~~ DLK-2A (SEQ ID NO:183).

60. **(Currently amended)** The method according to claim 15, wherein said DmGPCR binding partner is a leucokinin that has a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), ~~Ly7linaca lynmokinin~~ Lymnaca lymnokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and ~~DLK-2a~~ DLK-2A (SEQ ID NO:183).